

What is claimed is:

1. A method for tuning a resistance v. temperature profile of a surface mountable polymeric PTC device for use as an overtemperature protection device, said method comprising:
 - (a) preparing a laminate comprising a conductive polymer composite sandwiched between metal foil electrodes, said polymer composite having a melting temperature T_m ;
 - (b) crosslinking the laminate;
 - (c) forming a panel from the crosslinked laminate by patterning the laminate to form a plurality of surface mountable devices;
 - (d) irradiating the panel using electron beam irradiation of at least 20 Mrad; and
 - (e) providing individual devices by subdividing the irradiated panel.
2. A method according to claim 1, wherein the crosslinking of the laminate is accomplished using irradiation.
3. A method according to claim 2, wherein the panel is irradiated using electron beam irradiation of at least 50 Mrad.
4. A method according to claim 1 wherein the panel is subjected to a heat treatment comprising a temperature exceeding the melting temperature of the conductive polymer composite prior to the irradiation of the panel.
5. A method according to claim 2 wherein the panel is subjected to a heat treatment comprising a temperature exceeding the melting temperature of the conductive polymer composite prior to the irradiation of the panel.
6. A method according to claim 1, wherein the irradiation of the panel is accomplished using more than one irradiation step to achieve the electron beam irradiation of at least 20 Mrad, and the panel is subjected to a heat treatment comprising a temperature exceeding the melting temperature of the composite before each irradiation step.

7. A method for tuning a resistance v. temperature profile of a polymeric PTC device for use as an overtemperature protection device, said method comprising:

- (a) preparing a laminate comprising a conductive polymer composite sandwiched between metal foil electrodes, said polymer composite having a melting temperature T_m ;
- (b) crosslinking the laminate;
- (c) forming individual devices from the crosslinked laminate; and
- (d) irradiating the individual devices using electron beam irradiation of at least 20 Mrad.

8. A method according to claim 7, wherein the individual devices are surface mountable.

9. A method according to claim 7, wherein the crosslinking of the laminate is accomplished using irradiation.

10. A method according to claim 7, wherein the individual devices are irradiated using electron beam irradiation of at least 50 Mrad.

11. A method according to claim 7, wherein the individual devices are subjected to a heat treatment comprising a temperature exceeding the melting temperature of the polymer composite prior to irradiation.

12. A method according to claim 7, wherein the irradiation is accomplished using more than one irradiation step, and a heat treatment comprising a temperature exceeding the melt temperature of the polymer composite is performed prior to each irradiation step.